



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,645	10/14/2003	John Trankina	7967/83952	3212
24628	7590	03/09/2005	EXAMINER	
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			TRAN, CHUC	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/684,645

Applicant(s)

TRANKINA, JOHN

Examiner

Chuc D. Tran

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-22 is/are allowed.
- 6) ☒ Claim(s) 1-12 and 23-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/5/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims 6, 13, 16-18, 22-24 and 26-27. Therefore, the “base” in claims 6 and 17; the “light weight shell” in claims 13, 16-18, 22, 24 and 26-27 and the “structural flange” in claim 27 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claims 6, 17 and 27 are objected to because of the following informalities:

Art Unit: 2821

Claim 6, line 2, "the" (base) change to - - a - -;

Claim 6, line 2 and 3, "the antenna" change to - - the antenna tower - -;

Claim 17, line 2 and 3, "the antenna" change to - - the antenna tower - -;

Claim 27, line 4 and 5, "the antenna" change to - - the antenna tower - -.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter the "method of providing three stiffening elements having a first and second plate section spaced apart by a structural flange" which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is not clear how the "method of providing three stiffening elements having a first and second plate section spaced apart by a structural flange" works with the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

It is not clear what different limitation between the limitation device "steel

Art Unit: 2821

plate (18), Fig. 2” in claim 8 and the limitation device “spacer element (52), Fig. 10” in claim 1.

It appears from the illustration that the “steel plate (18)” and the “spacer element (52)” are the same element to be welled together between the antenna tower (54) and the stiffening element (54) as shown in Applicant’s (Fig. 3 & 10). Applicant is encouraged to implement this type of language in the interest of improving it’s clarity.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-7, 9-12 and 23-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Ryan (USP. 6,694,698).

Regarding claim 1, Ryan disclose an antenna tower reinforcement, for use with an antenna tower, comprising:

- a plurality of spacer elements (36) attached to the tower (10) (Fig. 3);
- a stiffening element (32) attached to at least two of the plurality of spacer elements (36) such that the stiffening element reinforces the tower along a plane parallel to the surface of the tower (10) (Fig. 3) (Col. 5, Line 1).

Regarding claim 2, Ryan disclose that the at least one stiffening members (32) are structural steel members (Col. 5, Line 5).

Regarding claim 3, Ryan disclose that the plurality of spacer elements (36) are structural steel elements (Col. 6, Line 24) (Col. 2, Line 48).

Regarding claim 4, Ryan disclose that the plurality of spacer elements are attached to the tower by welding (Col. 6, Line 31).

Regarding claim 5, Ryan disclose that the plurality of spacer element and the at least one stiffening member are made of structural steel (Col. 5, Line 5) (Col. 2, line 48), the plurality of spacer elements (36) being welded to the tower (10) (Fig. 3) and the at least one stiffening member (32) being welded to at least two of the plurality of spacer elements (36) (Fig. 3).

Regarding claim 6, Ryan disclose that the at least one stiffening element (32) extends from near a base (12) of the antenna tower to a height less than the height of the antenna tower (10) (Fig. 1).

Regarding claim 7, Ryan disclose that the stiffening members are comprised of any of a plurality of structural steel shapes (Fig. 3).

Regarding claim 9, Ryan disclose that the three high strength stiffening members (32) spaced equally apart on the circumference of the tower (Fig. 3).

Regarding claim 10, Ryan disclose that the two or more stiffening members (32) spaced about the circumference of the tower (10) (Fig. 3).

Regarding claim 11, Ryan disclose that the stiffening member (32) is a structural element comprising one or more structural plates (42) welded together (Fig. 4).

Regarding claim 12, Ryan disclose that one of the structural plates (42) is attached to at least one of the plurality of spacers (34) and is subsequently welded to another structural plate to form a stiffening member (Fig. 3 & 4) (Col. 6, Line 24).

Art Unit: 2821

Regarding claim 23, Ryan disclose a method of reinforcing a monopole antenna tower including the steps of:

- providing at least one structural stiffening element (32) (Fig. 3);
- providing a plurality of structural spacer elements (34 & 36) (Fig. 3);
- attaching the spacer elements (34 & 36) to the tower (10) in spaced apart configuration (Fig. 3); and
- attaching the at least one stiffening element (32) to at least two of the plurality of spacer elements (34 & 36) such that the stiffening element is in a plane parallel to the surface of the tower (10) (Fig. 2).

Regarding claim 24, Ryan disclose that the steps of providing a light-weight shell (24) having a cross-sectional shape similar to that of an antenna tower (10) and attaching the light-weight shell (24) to the structural stiffening elements (32) (Fig. 3).

Regarding claim 25, Ryan disclose that the steps of welding the plurality of structural spacer elements (34 & 36) to the tower (10) and welding the at least one stiffening element (32) to at least two of the spacer elements (Fig. 2).

Regarding claim 26, Ryan disclose that the steps of attaching the at least one stiffening members (32) to the shell (24) (Fig. 3).

Regarding claim 27, Ryan disclose a method of reinforcing a monopole antenna tower comprising the steps of:

- providing a shell (24) having a cross-section similar to the cross section of the monopole antenna tower (10) and a diameter greater than the diameter of the antenna and a length less than the length of the antenna tower (Fig. 1);

Art Unit: 2821

- providing a plurality of spacer elements (34 & 36) attached to the tower (10) (Fig. 3);
- providing three stiffening elements having a first and second plate section (42) spaced apart by a structural flange (Fig. 3 & 4);
- attaching each of the stiffening elements (32), by the first plate section (42) of each to at least two of the plurality of spacer elements by welding (Fig. 3 & 4);
- attaching the shell (24) to the second plate section of the structural stiffening elements, such that the shell is attached to the tower (Fig. 1 & 2).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan.

Regarding claim 8, Ryan disclose the antenna tower reinforcement as set forth in the claims except the steel plates welded together into a generally "Z" shaped member. Thus, it would have been obvious to one of ordinary skill in the art to have the "Z" shaped steel plates welded together into the stiffening member in order to provide a strong support along the length of the antenna tower as described in the Ryan' Abstract. It's matter of obvious of design choice.

***Allowable Subject Matter***

9. Claims 13-22 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 13, the references of the Prior Art of record fails to teach or suggest the



Art Unit: 2821

combination of the limitations as set forth in the claim: a light weight shell having a cross sectional shaped similar to the antenna tower with the diameter greater than the tower and at least stiffening members distributed between the shell and antenna tower and attached to at least two of the plurality of spacers.

Regarding claims 14-22 are allowable for the reason given in the claim because of their dependency status from the claim 13.

*Citation of relevant Prior Art*

Prior art Damiano (USP. 6,513,299) disclose antenna support.

Prior art Creaser, Jr. (USP. 5,101,215) disclose antenna tower.

Prior art Gobel et al (USP. 4,377,812) disclose antenna tower.

Prior art Harrison (US 20020140621) disclose apparatus and method for increasing monopole capacity using external strengthening.

Prior art John Ferdinand Ferm (USP. 1,959,756) disclose metal pole antenna tower.

Prior art Sopik et al (USP. 5,097,647) disclose support tower for communications equipment.

Prior art Bhame et al (USP. 5,880,701) disclose enclosed wireless telecommunication antenna.

*Inquiry*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

Art Unit: 2821

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TC

March 4, 2005